Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	**)**	
	)	
A National Broadband Plan for Our Future	**)**	GN Docket No. 09-51

COMMENTS OF PUBLIC KNOWLEDGE, MEDIA ACCESS PROJECT, THE NEW AMERICA FOUNDATION, AND U.S. PIRG

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Public Knowledge (PK), the Media Access Project (MAP) the New America Foundation (NAF), and U.S. PIRG (collectively "PK, *et al.*") submit the following comments in the above captioned proceeding.

We approach the National Broadband Plan with a new, fundamental understanding of the role of broadband in our economy and in our society. Plainly put, access to broadband has become an essential utility, as much as water and electricity are essential utilities. Broadband fits into that category because through a broadband connection to the Internet, businesses large and small can reach new markets and make their enterprises more efficient. Students have at their fingertips educational resources not conceivable a few years ago. Some sources of news and information, once confined to the printed page, are to be found online only. For far too long, however, policymakers treated broadband as a service available for the privileged, much like a high-priced model vehicle.

In short, broadband is not a luxury, and the policy of the United States, particularly the National Broadband Plan, should reflect that reality. Every aspect of U.S. telecommunications policy needs not only to be re-examined and revised, but in some cases done away with in favor of policies that are appropriate to the reality of not only the broadband market of today, but to make sure that the broadband market of tomorrow will exist to serve the needs of ordinary citizens and businesses.

To that end, PK, *et al.*, believe that the foundation of the National Broadband Plan must rest on the belief that certain fundamental principles are too important to be left to the marketplace, as the government has done. As a result, broadband policy has strayed significantly

from the Communications Act principles which are based not on the good works of "market forces," but on the rights of Americans to receive telecommunications services without discrimination at reasonable rates.

To correct the failures of our recent broadband policy, we suggest several elements that should be part of a new policy:

- An open Internet should be the foundation of the National Broadband Plan. The FCC should move quickly to adopt a non-discrimination principle, which will allow the Internet to operate as an open system as it has from the start. Activities such as monitoring Internet connections for copyrighted materials must not be allowed, just as opening of mail is not allowed to be part of a widespread fishing expedition on behalf of a private industry.

- User privacy must be protected in areas of content and customer records.

- Consumer rights must be rigorously enforced, with Internet Service Providers required to provide the services they advertise, without hidden charges or unfair practices.

- The Universal Service Fund and Lifeline programs must be restructured to aid in the deployment of broadband networks. Broadband, not voice communications, is the "must have" utility of the 21st century, and a broadband plan should address continuing funding needs for upgrades of networks and demand-side outreach and training.

The regulatory regime should reflect the failures of the marketplace, which have resulted in minimal competition, and higher rates for lower speeds than in many other industrialized nations. Our lack of competition can be traced to the reclassification of high-speed broadband services into Title I. As a result, we propose a range of options for the Commission to consider. Among them:

- The FCC should reclassify broadband services into Title II; impose structural separations on the offering of wholesale and retail broadband services; impose functional separations or divestiture on the companies offering wholesale and retail broadband services.

- The FCC should conduct a thorough review of competition and prices in the special access market, with the goal of making certain that incumbents make bandwidth available at reasonable and non-discriminatory rates. The absence of

competition for this crucial building-block of the broadband economy makes its regulation necessary.

- Spectrum reform is essential, starting with an inventory of what spectrum is being used, and continuing through reallocation of unused spectrum. In addition, the Commission should reimpose spectrum caps, which are necessary to further competition. As part of the spectrum issue, the Commission must make certain consumers have no restrictions on the devices they can use, while examining the anti-competitive aspects of handsets tied to one or two carriers.

Outside of the regulatory realm, the National Broadband Plan must examine the nature of demand for services, and the nature of traffic on the Internet. A complete broadband map, including "middle mile" facilities is essential. We must also study the nature of broadband traffic, to find out not only where the service is available, but how it is used. This data will ensure that we invest in networks that can withstand the needs of the future, and that all Americans enjoy the benefits of our national broadband infrastructure. We must also better understand the crucial role that non-commercial providers can play in the provision of services, and make certain there are no barriers to their entry to provide service to their residents.

These are wide-ranging and comprehensive proposals. They are certainly controversial. But at this stage of our economic and technological development, we can suggest no less, as the challenges to our economy become greater and our capacity for innovation shrinks due to the failure of the market to provide a vibrant, competitive and open market for the broadband services essential to our economic survival.

ARGUMENT

I. BASIC PRINCIPLES CRITICAL TO THE SUCCESS OF OUR NATIONAL BROADBAND PLAN ARE TOO IMPORTANT TO LEAVE TO THE MARKET

The mandate to create a National Broadband Plan represents a long-overdue acknowledgement by Congress that broadband has become a critical component of our national infrastructure. As Congress invests billions of dollars in broadband technology and increasingly integrates this new technology into our economy and our everyday lives, Congress and Federal agencies must begin with the fundamental principles and values that have formed the bedrock of our communications policy for more than 75 years, and allowed the Internet to become an invaluable tool for promoting education, economic growth, free speech and civic engagement.

We begin therefore by calling on the National Broadband Plan to recognize that certain fundamental principles are too important to leave to the marketplace. For far too long, the debate around broadband has centered exclusively on the use of market forces and commercial providers. Rather than begin with first principles such as the fundamental freedom of users to speak and innovate without permission from either the government or network operators, policy has looked to competition alone to protect these freedoms or protect traditional consumer rights such as privacy. Debates therefore centered on whether or not competition existed, and if not how to coax it into being.

But a vibrant broadband network, placed at the center of our economy and our ability to communicate with one another, must follow in the footsteps of the Communications Act of 1934. This begins not with a discussion of competition, but a broad statement of the rights of all Americans to provide "all people of the United States" without discrimination access to "adequate facilities at reasonable charges." The first statutes in Title II gave meaning to these

principles by outlawing unreasonable rates and practices.[1] The National Broadband Plan should likewise begin with a commitment to principles too important to leave to the marketplace, followed by rules that give these principles meaning.

Chief among these is the principle of open networks. Since its inception, the Internet has operated as an open system, allowing end users to connect the devices and applications of their choice to the network and to access the content of their choosing[2]. It is this very 'openness' that has allowed the Internet to grow and flourish, to build and enrich communities and to connect citizens with educational resources, their government and each other. At present, however, this openness faces a grave threat from proprietary systems that seek to regulate the flow of information on the Internet in a discriminatory manner. Recognizing that the FCC's four principles have proven insufficient in ensuring that networks operate on a non-discriminatory basis[3], we urge the FCC to adopt and enforce a strict principle of non-discrimination as part of the National Broadband Plan.

In order to ensure the full utilization of broadband resources as well as robust protections for citizens and end-users, the National Broadband Plan should also address the issue of user privacy and other consumer protections. The Plan should review existing statutes and regulations governing electronic privacy and should recommend improvements to ensure that user privacy is respected across all digital communications media. Additionally, the Federal government should draw up requirements regarding the type of notice that service providers are required to provide users with in the event of a change in that provider's terms of service or acceptable use policies.

[1] *See, e.g.,* 47 U.S.C. §§201, 202.
[2] Insofar as none of those choices violated Federal, State or local laws or harmed the network.
[3] For example, the principles do not explicitly address cases where a network provider prioritizes or favors certain content, applications and services over others.

Subscribers should receive the service that network providers advertise, without hidden charges or subject to other unfair practices.

Finally, Congress and the FCC must recognize that access to broadband is not a luxury or privilege. Broadband has become an essential utility, and we must ensure that every American has not merely the opportunity to subscribe to broadband access service, but has ***meaningful*** access that includes both consideration of affordability and training and equipment to use broadband connectivity to its full potential. Accordingly, the National Broadband Plan should propose to reform and overhaul existing programs to provide long-term material support for broadband deployment initiatives.

Both Lifeline and the Universal Service Fund (USF) should be restructured so as to aid in the deployment of broadband services nationwide. These programs might also be leveraged to promote and enable the deployment of tools that will increase the adoption and meaningful impact of broadband, including hardware, software and education.

In order to fully realize universal access as well as the benefits of connectivity, we must recognize that one of the most important roles played by the Federal government in the National Broadband Plan will be to protect those principles that are too important to entrust to the market.

A. Open Networks – Users Must Have Freedom to Speak, Download and Innovate Without Interference From Gatekeepers

As the Commission has recognized, the "[n]ew, innovative broadband products and applications" brought to us by the Internet are "fundamentally changing the way Americans communicate at work, … how they are educated and entertained, and care for themselves and each other."[4] The success of the Internet as a world-changing communications medium and its

[4] Federal Communications Commission, *A National Broadband Plan for Our Future, Notice of Inquiry* ¶ 4, FCC 09-31, GN Docket No. 09-51 (April 8, 2009) [hereinafter *National Broadband Plan NOI*].

ability to offer us new, unforeseen uses for communications is largely a product of its openness. In the context of access to the Internet, "openness" refers to the equal ability of any person or organization to reach any other person or organization, without interference from the entity providing that access. It is this lack of interference which has allowed countless innovators to create new services and applications without permission from gatekeepers in whose interest it might be to disadvantage, prevent, or control those innovations.

The Commission has recognized the need to protect users and innovators on the Internet by ensuring this openness. This recognition is embodied, in part, by its Internet Policy Statement.[5] And as the Act has recognized, adherence to the Internet Policy Statement is a *minimum* for ensuring open networks as we move forward as a broadband-connected nation.[6]

1. The Fifth Broadband Principle

However, as demonstrated by the past activities of Comcast[7] and the recent reported activities of other ISPs, it is clear that service providers still have the ability and the incentive to engage in discrimination against types of traffic they deem to be less important. Thus, we need a fifth "nondiscrimination" principle: "consumers are entitled to communicate any lawful data with the destination of their choice without any degradation or preference the consumer has affirmatively requested."

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[5] *See National Broadband Plan NOI* ¶ 48; *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, Policy Statement*, 20 F.C.C.R. 14986 (2005) [hereinafter *Internet Policy Statement*].

[6] *See American Recovery and Reinvestment Act of 2009*, Pub. L. No. 111-5, 123 Stat. 115 (2009) [hereinafter *Recovery Act*]; *National Broadband Plan NOI* ¶ 48.

[7] *See In the Matters of Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications*
Broadband Industry Practices Petition of Free Press et al. for Declaratory Ruling
that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable Network Management", 23 F.C.C.R. 13028 (2008) [hereinafter *Comcast Order*].

At it's heart, nondiscrimination in the Internet context means that no piece of data is preferred over another piece of data based on *anything* other than which user that data it is from or specific preferences users have affirmatively requests (including requests based on user-driven QoS standards). This means that an ISP may not alter how it treats a piece of data based on where on the Internet it is being sent, what type of protocol it uses, what type of data it contains unless the consumer has affirmatively requested it, and in that case, that data's treatment may only be altered with respect to that user's other data.

It is not the role of an ISP to decide which of user's data is more important – only the user can make that determination, and the ability of the user to choose is what makes an open Internet a near-perfect competitive platform. Acting Chairman Copps has repeatedly recognized the need for a fifth nondiscrimination principle.[8] And while such a principle has not yet been adopted by the commission for all U.S. networks, it should be made a part of any plan to expand the reach of real broadband access to all Americans.

2. Platform-Neutral Openness

It is also critical that openness principles be applies to all broadband Internet access platforms, regardless of the technology used. The differing technical challenges brought by wireless or other communications technologies should not be allowed to provide an excuse to tilt the otherwise level playing field that the Internet provides or enable some providers of Internet access to leverage their use of a particular technology into an anticompetitive force in markets for other services. Only network management which is necessary to the basic functioning of the network should be allowed.

[8] *See, e.g., Comcast Order, Separate Statement of Commisison Michael J Copps* 3, *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-183A3.pdf; *Copps: FCC Needs Fifth Net Neutrality Principle,* Ars Technica (Apr. 6, 2009), *available at* http://arstechnica.com/tech-policy/news/2009/04/a-pre-history-of-the-fccs-fifth-internet-rule.ars.

3. Free Speech and Open Networks

The idea of open networks embodied by "net neutrality" and the five principles is akin to that of free speech embodied by the First Amendment. Without placing strict limits on what ways gatekeepers can interfere with, block, or control communications, the party who controls the medium gains the ability to change the message. The Internet is becoming part and parcel of speech itself. We must ensure that our National Broadband Plan is truly planning for a national, democratic, free communications medium.

4. "Managed" Networks

In some cases, service providers offer non-Internet "managed" services to their customers. These services may include video, voice, direct-to-provider health care monitoring, or a host of other services. In most cases, these services will compete with similar Internet-based offerings from third parties. While managed networks may offer value to consumers or business customers, in order to fully realize the benefits of competitive service offerings promised by the Internet, a national broadband plan must ensure that these managed services are not used to competitively disadvantage Internet-based solutions. A National Broadband Plan must not allow such managed networks to provide an end-run around the openness principles which have always and should continue to drive Internet innovation.

B. Neither Copyright Filtering Nor Any Other "Good Cause" Justifies Networks Acting as Gatekeepers

As discussed above, for the Internet to be useful and worthwhile to all Americans, access to the Internet should be content-neutral, and application and device agnostic. The success of the Internet is owed to the ease with which information can be copied from one computer to another and to its flexibility as a medium through which innumerable applications can communicate

freely.[9] Not only have these features enhanced our democracy, but they have acted as catalysts for innovation by lowering market barriers for new entrants, which can threaten competitors and force them to adapt to new business models[10].

While some adapt, others prefer to slow progress by changing how the Internet functions. The Commission must resist the suggestions from incumbents who wish to change the rules of the Internet and require Internet Service Providers (ISPs) to police their networks for alleged illicit behavior. While unlawful behavior is not to be condoned, expanding the definition of "reasonable network management" to provide a way for non-governmental third parties to enforce legal regimes would drastically change the nature of the Internet.

Today, Internet connections are as important as yesterday's access to the postal, electric, or telephone service. As our recent experience with the phone company monitoring of domestic calls following the attacks of 9/11 clearly demonstrate, many Americans find the idea of using third parties to monitor our conversations to prevent wrongdoing deeply abhorrent to our values as a free society. If the threat to national security does not – in the minds of many – justify recruiting phone companies to monitor our national phone system indiscriminately, surely we cannot justify granting (or requiring) even greater intrusions on our personal privacy that comes from monitoring our broadband traffic.

Nevertheless, industry participants and their supporters have asked that we submit to non-stop monitoring of what we view, what we say, what we buy, and whatever else we do online for the purpose of maintaining their existing business models. For example, in previous proceedings

[9] Reply Comments of Public Knowledge, *et al.* WC Docket No. 07-52, at 1 (July 16, 2007).

[10] See Letter from Wireless Founders Coalition to Chairman Kevin Martin, WT Docket Nos. 06-150, 96-86, PS Docket No. 06-229, at 3 (June 7, 2007) ("What makes the Internet so friendly from an entrepreneur's perspective is its Openness. One does not have to ask … permission to launch a new product, service, or device. To borrow the Nike slogan, you can 'just do it.'"), available at http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519535073.

on the issue of network neutrality, NBC Universal asked the Commission to require that broadband providers "use readily available means to prevent the use of their broadband networks to transfer pirated content."[11] Although some in Congress have echoed the idea of requiring ISPs to filter and police traffic for what seem good causes – such as "deterring unlawful activity, including child pornography and copyright infringement"[12] – Congress has consistently rejected these attempts. The National Broadband Plan should state unequivocally that we reject the concept that we should outsource Big Brother and subject the traffic of Americans to unwavering scrutiny by ISPs however noble the cause.

Even assuming we considered it reasonable to subject internet traffic to unwarranted search in a manner we would never permit of our physical mail, telephone conversations, and physical premises, imposing such an obligation on ISPs (or allowing them to assume it voluntarily) would engender enormous cost for little gain. Employing techniques to "filter" broadband connections to look for unlawful behavior would require ISPs to examine every bit of information a subscriber puts on the web, in an email, in an instant message, or remixed into a video, in order to find an illicit act, all without probable cause. Technologies that enable filtering, like "deep packet inspection" are flawed for being over-inclusive (and thus unconstitutional for their chilling effect on free speech) and under-inclusive (and thus a waste of government and private resources).[13] If the alleged act is copyright infringement, not only may

[11] Comments of NBC Universal, Inc., WC Docket No. 07-52, at 8 (Jun. 15, 2007).
[12] Senate Amendment 417 to Senate Amendment 98 to H.R.1, proposed by U.S. Senator Diane Feinstein, directs the Assistant Secretary of the National Telecommunications and Information Administration to "allow for reasonable network management practices such as deterring unlawful activity, including child pornography and copyright infringement." http://thomas.loc.gov/cgi-bin/bdquery/z?d111:SP00417:
[13] Reply Comments of Public Knowledge, *et al*. at 3.

unauthorized copying be lawful and critical to free speech,[14] but only a court can determine whether a use is infringing. Additionally, monitoring subscribers' network traffic would be an invasion of privacy, done at the request of a minority industry, and violating the rights of everyone who is online.

C. The Law Must Continue To Protect Privacy and Other Consumer Rights

Nowhere is the protection of privacy and other traditional consumer protections more urgently needed than in the broadband world. As broadband becomes more central in our daily lives, from our most significant financial transactions to our most personal communications, the ability of network operators and service providers to collect user information, or engage in unfair or deceptive practices, grows exponentially. But existing law provides no clarity on the protections broadband subscribers can expect, or even what federal, state or local agency will provide them.

For too long, users have suffered while regulators have waited to see if "the market" will provide adequate protection. But a competitive market does not ensure consumer protection. The used car market is fiercely competitive, but we still need "lemon laws" to protect consumers. The National Broadband Plan must make appropriate recommendations on privacy and consumer protection rather than simply wait to see what "the market" will provide.

1. Privacy

Broadband users' privacy rights are a paramount consideration as penetration increases and more aspects of individuals' lives and business are conducted online. Ensuring privacy protection increases trust and use of networks, encourages free expression and enterprise, and most importantly, protects the safety and civil rights of users.

[14] *Eldred v. Ashcroft*, 537 U.S. 186, 197 (2003): ("Copyright … does not impermissibly restrict free speech, for it grants the author an exclusive right only to the specific form of expression … and it allows for "fair use" even of the expression itself.")

One overarching concern regarding communications privacy is that the laws intended to protect user privacy form a complex patchwork across different technologies, differ according to specific applications, and make geographic distinctions that are all decreasingly relevant to online use of networks. A user whose email is stored locally on her hard drive is entitled to Fourth Amendment protections that disappear once that same information is stored on a remote server. Nevertheless, the user is most likely to formulate her expectations of privacy based not upon the working of the underlying technology, but upon the functions they serve and the interface placed upon them. Internet-based services, operating under one set of regulations, might imitate differently-regulated services (such as VoIP imitating traditional telephony).[15] Likewise, a given application or protocol might run over a variety of networks, which could be subject to different regimes. For example, a consumer may receive the same programming via a cable system or an Internet application designed by the same provider, and yet his personal information in each instance could be subject to different subpoena and disclosure rules[16]. Depending upon the particular information being disclosed and the particular parties initiating disclosure, very different laws may apply. These complications apply not only to the privacy and confidentiality of communications, but also to the privacy interest in customer records. While Customer Proprietary Network Information (CPNI) may be protected for the customers of telecommunications carriers,[17] the protections of section 222 are unavailable for customers of other types of service providers.

The Commission's findings that privacy should be protected equally among telecommunications and Internet services are therefore key to protecting and advancing privacy

[15] *See* In the Matters of IP-Related Services and E911 Requirements for IP-Enabled Service Providers, Final Rule 70 Fed. Reg. 37273, 37274 (June 29, 2005) ("The record clearly indicates, however, that consumers expect that VoIP services that are interconnected with the PSTN will function in some ways like a 'regular telephone' service").
[16] *See, e.g., Interscope Records v. Does 1-7*, 494 F.Supp.2d 388 (E.D. Va. 2007).
[17] 47 U.S.C. §222.

rights. In the areas of both content and customer records, the Commission should work actively with Congress to ensure that consumers and citizens may expect their information to be well protected regardless of the technical underpinnings of the services they use. Information services' collection of customer information should be subject to at least as rigorous a standard as CPNI for telecommunications services, and the confidentiality of information received should not be dependent upon whether that information is received as part of cable service or some other electronic transmission of information.

The interactive nature of the Internet provides a tempting mechanism for advertisers to collect targeting information from users. Likewise, ISPs have incentives to discriminate against traffic on their networks that may compete with their own content offerings. The fruits of these incentives have been evident in two recent controversies involving Deep Packet Inspection (DPI): the NebuAd program[18] and Comcast's blocking of BitTorrent.[19] Each of these incidents implicates an unwanted intrusion into a user's information. Despite this, questions of jurisdiction and authority are raised in attempts to excuse this behavior. The Commission's rules and the applicable statutes should make clear that such intrusions should not occur on any platform.

Despite consumers' significant concern about their online behavior being tracked,[20] the opaque nature of information gathering and the ease with which contractual terms are imposed make online privacy a poor fit for market- or self-regulation. Recent studies have found that consumers widely misunderstand the nature of online privacy policies, thinking that uses of their

[18] Robb Topolski, *NebuAd and Partner ISPs: Wiretapping, Forgery, and Browser Hijacking*, June 18, 2008, http://www.publicknowledge.org/pdf/nebuad-report-20080618.pdf.
[19] FCC press release, *Commission Orders Comcast to End Discriminatory Network Management Practices*, August 1, 2008, *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-284286A1.pdf.
[20] *See, e.g.*, Center for the Digital Future, Univ. of S. Cal., *Surveying the Digital Future: Survey Highlights*, 6, April 28, 2009, *available at* http://www.digitalcenter.org/pdf/2009_Digital_Future_Project_Release_Highlights.pdf; Consumers Union, *Consumer Reports Poll: Americans Extremely Concerned About Internet Privacy*, Sept. 25, 2008, *available at* http://www.consumersunion.org/pub/core_telecom_and_utilities/006189.html.

information is restricted when it is not.[21] The lack of clear information for consumers mean that they are often unaware of practices that might otherwise cause them to migrate to other providers. Compounding the inability for market forces to encourage better privacy protection is the marked lack of competition in many areas for broadband Internet service.

2. Transparency and Other Consumer Rights

Getting accurate information to consumers is critical to developing a plan for national broadband deployment, higher speeds, competition, and innovation. This means that those offering network services should be obligated to provide real, useful information to consumers about what their service provides before the consumer makes a service choice. This information should include not only the maximum speed allowed, but more detailed information about likely average speeds, times of congestion, the extent a network is overprovisioned, and any minimum speed guarantees. Most importantly, while more technical details should be available to technology-savvy users, the basic information provided must be accessible to and understandable by the average customer. The average customer should be able to compare advertised speeds and terms of service with what he or she actually receives, and should have clear recourse where the provider does not deliver the promised service.

Broadband providers are increasingly being found using false advertising or for not being transparent in declaring their terms and services in an effort to lure customers.[22] Some providers

[21] Joseph Turow, Deirdre K. Mulligan & Chris Jay Hoofnagle, Univ. of Pa.'s Annenberg Sch. for Commc'n & U.C.-Berkeley Law's Samuelson Law, Tech. and Pub. Policy Clinic, *Research Report: Consumers Fundamentally Misunderstand The Online Advertising Marketplace*, 1, Oct. 2007, *available at* http://groups.ischool.berkeley.edu/samuelsonclinic/files/annenberg_samuelson_advertising.pdf.

[22] *See, e.g.*, BBR, "U.S. Broadband Price Comparisons," [May 22, 2007], http://text.broadbandreports.com/shownews/83886 [accessed: June 2, 2009].

are providing offers at low costs with a hidden catch of long-term contracts. [23] The length of these contracts means that the customer would miss out on better upcoming offers in the market and stay tied to the network provider for a long time. Just a few months ago, Clearwire was charged on behalf of five customers for deceptively advertising and then charging early termination fees when the customers sought to cancel its services.[24] The customers alleged that Clearwire had advertised its service as "fast, reliable and always on alternative to cable and DSL" while it was in fact, "far inferior to cable Internet and DSL, as consumers frequently experienced service disruptions, including dial-up speeds and lack of service entirely". [25]The Commission should require that broadband providers adhere to transparency in declaring their service contracts and abide by them in deployment of services. Such an action will warrant fair competition among broadband providers and in turn secure consumer welfare.

Disclosure should also extend to all forms of network management or monitoring which are used by a service provider. In those rare cases where a service provider may lawfully limit speeds, observe user activity, or in any way alter user communications, then these must be clearly and publicly disclosed. Further, unless such activity is necessary to the basic functioning of the network, the provider should be required to secure an affirmative, informed, "opt-in" consent from users.[26] Critically, federal law must ensure that consent is real. Service providers cannot be allowed to use consent – especially in the absence of a real competitive alternative --

[23] *See, e.g.*, New York Computer Help Blog, " Verizon is Jumping on The Bandwagon…With a Hidden Cost," [May 14, 2009], http://www.newyorkcomputerhelp.com/blog/2009/05/14/verizon-is-jumping-in-on-the-netbook-bandwagonwith-a-hidden-cost/ [accessed: June 2, 2009].
[24] Multichannel News, "Clearwire Sued Over Early-Termination Fees," Todd Spangler, [April 24, 2009], http://www.multichannel.com/article/209951-Clearwire_Sued_Over_Early_Termination_Fees.php [accessed: June 1, 2009]
[25] Id.
[26] *See, e.g., Testimony of Gigi B. Sohn Before the U.S. Senate Committee on Commerce, Science & Transportation, Hearing On Broadband Providers and Consumer Privacy* (Sept. 25, 2008), *available at* http://commerce.senate.gov/public/_files/SohnTestimony.pdf.

as a method to evade the internet principles, nondiscrimination rules, and consumer protections discussed above.

Finally, we reiterate that disclosure and consent are not sufficient safeguards to ensure competition and innovation on the Internet. Rather, ***in addition*** to affirmative rules on openness and consumer protection, federal law must enhance transparency as a means of providing accountability. The boundaries of how service providers may treat user data should not be pushed back by any ISP capable of getting a user to click "Agree" in a web form. Whether the activity in question conforms to openness principles, privacy concerns, and the law must be considered independently of any notice given to the user.

D. Reform of USF Can Give All Americans Meaningful Access To Broadband

Congress has understood since 1996 that "advanced telecommunications capabilities" would be essential for Americans in the 21st Century[27] and critical to preserving "favoring diversity of media voices, vigorous economic competition, technological advancement, and promotion of the public interest, convenience, and necessity."[28] At the same time, Congress also embraced the idea of providing broadband to schools, libraries and rural healthcare institutions.[29] Nevertheless, recognizing the state of existing technology in 1996, Congress did not disturb legacy programs, such as lifeline/lifelink and the high cost fund, designed to bring voice service to the urban poor and high cost rural communities.[30]

But technology has vastly improved. We can preserve existing subsidized service by providing them over an IP platform while expanding the concept of universal broadband to include meaningful access for all Americans. The time has come to recognize that broadband,

[27] Telecommunications Act of 1996, Pub. L. 104-104, Section 706 (codified at 47 U.S.C. §157 nt).
[28] 47 U.S.C. §257(b).
[29] *See* 47 U.S.C. §254.
[30] *See* 47 U.S.C. §254(j).

not voice, has become the "must have" utility for the 21st Century. A National Broadband Plan should have as its centerpiece a plan to reform USF to address the continuing funding needs pertaining to both build out/upgrades and demand side outreach/training. It should also provide funding for customer premise equipment (CPE) such as computers to make the dream of meaningful universal access a reality.[31]

The annual budget collected by USF nearly matches the entire broadband stimulus package for NTIA and RUS approved in the ARRA. It is a credit to the power of incumbency and bureaucratic inertia that so much money does so little good. Every study and proceeding declares that USF wastes billions of dollars through artificial stovepipes breaking services into irrational categories, each with its own arcane rules and set of incumbents resistant to change. Simply rationalizing this fund to eliminate the bureaucratic waste and outright fraud that has bedeviled the program can provide the equivalent of an annual broadband stimulus package without drawing on new sources of revenue.

This is not to say that funding should not also be rationalized. To the contrary, a shift to a broadband-oriented fund should entail rationalization of the funding mechanism to distribute the burden more effectively. But none of this will happen while the Commission and Congress entertain endless debate without making the hard decisions. We learn from the recent DTV transition, which began in 1996 and is now scheduled to end on June 12, 2009. What happens when Congress leaves a complicated conversion to industry stakeholders without setting firm deadlines.

Until 2005, progress on transition was glacial. Conversion to digital relied on a slow shifting of stations and consumers to digital television, triggering a shut off when 85% of the

[31] We address the need for a policy to address "demand side" generally below in Part III.

country converted to digital television. This created a market paralysis where broadcasters had no market incentive to convert to DTV or invest in developing expensive DTV programming that no one could receive with analog television sets. This, in turn, stalled development of the production of digital tuners, since manufacturers had no reason to build them and retailers had no reason to stock them. And, if they would have existed, consumers had no reason to buy them. Congress finally broke this logjam by mandating a conversion to digital and an end to full-power analog broadcasting. Even then, the initial failure of Congress to fund outreach and sufficiently fund converter boxes nearly created a disaster for the transition.

Applying this lesson to broadband, we should seek to phase out the stovepipes around USF and convert the fund to one that subsidizes broadband (wireline and wireless), services deliver by broadband, and equipment and training so that consumers can take full advantage of broadband access. Pure broadband connectivity is capable of providing all the services currently supported by USF, in addition to the expanded capabilities of an open broadband connection. The ultimate goal of USF reform should be to ensure that all existing services are supported by the mechanism of USF paying into a single, coherent fund that subsidizes a broadband connection, CPE, outreach, and education on the enhanced capabilities of broadband. This can be accomplished by requiring all recipients of funds for any purpose to provide the subsidized service ***via an open broadband connection***, with the broadband capacity also made available to the recipient of the service. In other words, plain old telephone (POTS) providers in high-cost areas will only receive funding if they provide POTS service via VOIP, and make the broadband connection available as part of the subsidized service.

II. THE NATIONAL BROADBAND PLAN SHOULD TAKE STEPS TO ENSURE A VIBRANT AND COMPETITIVE MARKET EXISTS FOR BROADBAND ACCESS AND OTHER SERVICES DELIVERED BY BROADBAND.

Although we begin with principles too important to trust to the vagaries of the marketplace, markets will continue to play a critical role in broadband policy. As a first step, however, we must distinguish "market forces" and "competition" from an unregulated marketplace. Since the passage of the Telecommunications Act of 1996, both the Commission and the federal courts have at time confused a preference for the use of market forces over classic "command and control" regulation with a religious conviction that competition occurs only in the absence of regulation.[32] For example, former FCC Chairman Michael Powell opined at his first press conference that:

> I don't believe deregulation is like the dessert that you serve after people have fed on their vegetables, like a reward for competition. I believe deregulation is instead a critical ingredient to facilitating competition, not something to be handed out after there is a substantial number of players and competitors in the market.[33]

Powell's insistence on deregulating as a prerequisite to competition, rather than considering whether specific regulations actively promoted the development of competitive markets, created a wave of deregulation that created our current levels of market concentration in both wireline and wireless broadband, the lack of any meaningful consumer protection measures, and the imposition of practices such as early termination fees (ETFs) that make it harder for consumers to "vote with their feet" by switching provider. The number of wireline ISPs providing service rapidly dropped from over 6,000 to a comparative handful, and supposed "third pipe" competition from broadband over powerlines and wireless providers never materialized. Rather than a prerequisite to competition, mindless deregulation proved an unmitigated market disaster – a result utterly predictable (and predicted) by application of sound economic principles rather than ideology.

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[32] *See, e.g.*, Fox Television Stations, Inc. v. FCC, 280 F.3d 1027, 1044 (D.C. Cir. 2002) (equating 1996 Act preference for market mechanisms with a mandate to deregulate).

[33] *See* Rodney L. Pringle, "Powell Wants A Less Intrusive FCC," Communications Today (February 7, 2001), *available at* http://findarticles.com/p/articles/mi_m0BMD/is_25_7/ai_71060655/ (last viewed June 8, 2009).

Commentors here propose regulatory structures that promote competition. These proposals recognize the economic realities of communications markets will require significant regulatory structure to create opportunities for market forces. Communications markets are large, complex and interrelated, with significant opportunity for market participants to create lock in through increased switching cost, information asymmetry, and leveraging market dominance in related markets. The difficulty for regulators in monitoring market behavior creates further challenges, as does the need to respond quickly to changes in technology. Finally, the need for massive investment in networks, coupled with the low marginal cost of providing service, and the government restriction on certain inputs, such as spectrum, create further opportunities for market actors to thwart competition in a deregulated environment.

Rather than conclude that these circumstances make regulation impossible, a study of what has worked historically and works currently overseas should inform the economic portion of the National Broadband Plan. As an initial matter, some form of structural separation between consumer services and bandwidth wholesale should be considered for companies that provide services to both consumers and competitors. Alternately, service providers could be required to completely divest themselves of any holdings that are seen to conflict with those services offered by the core business. It is only through some form of structural separation that the FCC and Congress can truly ensure that wholesale access to bandwidth is offered at reasonable, nondiscriminatory rates. Subsequently, reasonable pricing at the wholesale level will encourage both competition and affordability at the consumer level. Alternatively, the Commission should consider reclassifying broadband access as a Title II service. Finally, at a minimum, the Commission should place a high priority on special access reform to facilitate competition even under the existing structure.

In order to aid broadband deployment, especially in rural areas where extensive physical infrastructure may not prove cost-effective, the FCC and Congress should work to ensure that spectrum is being used as fully and efficiently as is possible. To this end, both the FCC and Congress should seek to reform those statues governing the use of spectrum and should seek to make more spectrum available on an unlicensed basis, so as to encourage innovation as well as competition among service providers.

Finally, costs that discourage users from switching providers – either direct costs such as early termination fees (ETFs) or indirect costs of switching such as the inability to move equipment or applications from one network to another – should, to the greatest extent possible, be addressed and eliminated. Unless consumers are allowed to freely switch between providers in fact as well as in name, we will never have a truly competitive market for broadband access and related services.

A. Structural Separation

While the National Broadband Plan will have a great many components, the heart of any competitive plan must include a regulatory structure that provides for the most benefits for consumers. Without a regulatory structure that sets the ground rules for true competition, consumers will be denied the benefits of lower prices, increased choices and more innovative services.

The course the Commission has followed over the past eight years has turned out to be spectacularly wrong in all of those aspects. There is little to no competition for broadband services in the residential and "middle mile" markets. As a result, U.S. consumers pay higher rates for services with slower speeds than do consumers in other industrialized nations. Our record of online innovation has slowed to a crawl. The U.S.'s standing in the world ranking of

broadband adoption falls continually. (One can look at various rankings and dispute any given position, but the trend in all of them is clear. America is clearly falling behind.)

The reason the U.S. is falling behind can be traced directly to the decisions the Commission made over the past 10 years to reclassify broadband service, taking it out of the environment of Title II while moving it into the more legally murky area of Title I by classifying broadband as an "information service" instead of as a "telecommunications service." Now is the time to recognize that this deliberate decision to deregulate by redefinition failed to produce the promised land of "intermodal competition" and reverse that decision.

Current Acting Chairman (then-Commissioner) Copps set out the benchmarks for such a renewed look at the situation in his concurring statement on the DSL reclassification order released Sept. 23, 2005:

> Let me sum up by reminding the Commission that we are saying today that we take the dramatic step of reclassifying DSL in order to spur broadband deployment and to help consumers. I want us to test that proposition a year from now. If by next year consumers have more broadband options, lower prices, higher speeds and better services, maybe this proposition holds true. If our broadband take-rate reverses course and the United States begins to climb up the ladder of broadband penetration rather than falling further behind so many other nations, then we'll have something to crow about. If we get no complaints about higher bills, loss of privacy and diminished access for the disability communities, we can take a bow. And critically, if we make progress on public safety and homeland security, we can be proud of our actions. So I hope next year the Commission will put its money where its mouth is and check to see if its theory yields real world results for American consumers. And if it doesn't achieve these results, I hope we'll admit it.[34]

By the Copps Index of Broadband Progress, the results since the reclassification have been dismal. Our broadband remains expensive. According to the Organisation for Economic Cooperation and Development (OECD), U.S. consumers pay an average $10.02 per mbps.

[34] *Appropriate Framework for Broadband Access to the internet Over Wireline Facilities*, 20 FCC Rcd 14853 (2005) (statement of Commissioner Copps).

Fourteen nations have cheaper rates, starting with Korea at $0.85/mbps, France at $3.30 and the U.K. At $4.08.

Not surprisingly, most of the nations which rank above us have a different, if familiar, regulatory structure. It is the structure abandoned by the Commission in the 2005 *Wireline Classification Order*. The structure rejected by the FCC and adopted by many European countries allows for line sharing and wholesale access for competitors with strong enforcement of anti-discrimination rules. The time has come for the rest of the Commission to respond to Acting Chairman Copps' call for an honest assessment of this result.

But the European Union, at the urging of European Commissioner Viviane Reding, is pursuing an even more aggressive course – to require network operators to separate their operations by function, the wholesale from the retail. As she said in a speech last year:

> I see it as entirely appropriate for regulators to allow infrastructure providers to make a reliable return on next generation access investments in return for testable guarantees of non-discrimination and an agreed plan for infrastructural investment that will lead to an open, high speed infrastructure. By the way, one of the potential attractions of functionally separating access networks is to make this incentive structure clearer and more operational.

As the U.S. moves forward to reclaim the broadband momentum that has eluded it for the past four years, it faces a range of policy choices.

1) Do nothing. Maintaining the current regulatory environment will only strengthen the role of the incumbents, stifle competition and lead to a further trend in the decline of U.S. leadership and economic development. It is the least desirable option.

2) Reclassify broadband services. Putting broadband services offered by carriers back under Title II carries a wide range of benefits. For one thing, the Commission can stop trying to shoehorn those services into some Title II responsibilities that the Commission has determined should remain regulated.

More importantly, under Title II, more competitors will have access to networks they wouldn't have otherwise, leading to more competition, lower prices and more innovation – but only if the regime is strictly enforced. As we saw previously in the long-distance, competitive context, incumbents will constantly try to manipulate any lever to force the failure of the "level playing field," including serial challenges to any pricing mechanism. A negotiated rate level, with public disclosure and most-favored nation clauses might help alleviate some of the angst.

The Supreme Curt's recent decision in *FCC v. Fox Television Stations, Inc.*, No. 07-582 (U.S. April 28, 2009) has made it clear that the Commission can revisit its decision and reclassify broadband access as a Title II service in light of market developments since 2005. In *Fox*, the Court explained that a policy reversal required no greater standard of review than an initial decision. "We find no basis in the Administrative Procedure Act or in our opinions for a requirement that all agency change be subjected to more searching review. The Act mentions no such heightened standard."

3) Impose structural separation. In Computer II and Computer III, the Commission attempted to separate the provision of basic and other services. The structure, particularly in Computer III, was a tentative attempt at deregulation and set the stage for the current fiasco. Structural separation may well be a compromise that deregulation advocates may endorse, if only because such a structure is easily subverted. A system based on structural separation, therefore, must carefully examine how to prevent discrimination by vertically integrated network operators. Furthermore, given the history of FCC lack of enforcement during the period when the FCC determined to deregulate broadband in 2001 and the final elimination of access regulation in 2005, it would be imperative for a structural separation policy to

provide a means whereby new entrants can secure speedy relief without reliance on the political will of the FCC to enforce the law.

4) Impose functional separation/divestiture. In order to create the right incentives for a new broadband explosion, functional separation should be seriously considered. Every economic entity exists to further its own enlightened self-interest. If the self-interest of a company is to sell wholesale access to broadband services, then it will try to sell as much of that product as possible, and will invest what is necessary to grow the business. If its self-interest depends on restricting access to competitors in order to further a retail industry, then it will do so, whether by lack of investment, throttling, bandwidth caps or other means. European companies are pursuing this option at the direction of their governments and the European Union.

5) Finally, although not a regulatory solution, local, state or federal government construction of infrastructure can provide a means of enhancing competition and consumer choice. Here also, however, Commentors acknowledge potential risks. Incumbents have proven successful in the past in persuading the governments to subsequently divest physical facilities even after successful build out. For example, in the early 1990s, the National Science Foundation (NSF) built out the first national backbone and facilitated the development of a robust "middle mile" market by providing free traffic exchange (peering) and national network access points (NAPs). In the mid-1990s, under pressure to avoid "competing with the private sector" and convinced of the inherent superirority of private sector management, NSF sold the national backbone – including the NAPs – to the RBOCs for the regions in which the NAPS were located. The RBOCs preferred to build out their private infrastructure, not subject to peering requirements. In a relatively brief time,

industry-wide peering essentially disappeared, altering and consolidating the middle mile market.

Recognizing the diversity of the broadband industry, we should expect that a combination of approaches will prove necessary to strike the right balance of ensuring competitive service while maintaining private investment and innovation. Our current experience tells us whatever the flaws of these regulatory alternatives, the current deregulatory environment has utterly failed to produce the residential service or middle mile infrastructure we must have to meet our national broadband needs. The time has come to engage in the assessment called for by then-Commissioner Copps when we adopted deregulation in 2005, and consider the value of other approaches.

In sum, our regulatory structure has failed. It is time for a new one that will serve a greater variety of interests than simply those of the carriers.

B. Competition Requires Special Access Reform

As part of the Commission's analysis of effective mechanisms to achieve the goals of the Recovery Act, there is a need to review existing regulatory structures for "special access" services. Special access is a high capacity transmission path that connects the Internet backbone to local facilities (*i.e.*, cell phone towers, local area networks, etc.). In most parts of the nation, these paths are provided only by incumbent local exchange carriers. The local facilities, so connected, include carriers that do not own physical broadband infrastructure and therefore rely on special access to support their telecommunication services. Large businesses that have higher and advanced bandwidth requirements also need direct access to the Internet and therefore also make use of special access.

Absence of competition amongst the providers of special access makes its regulation necessary. There is building consensus that for incumbent local exchange carriers, providing

special access to wholesale customers is a primary business course which they use to leverage increasing special access revenues via inflated special access prices.[35] According to a study, in 2007 Verizon extracted a rate of return of 700 percent for its special access transmission path.[36] The Commission should ensure that incumbent providers charge fair access rates so that carriers competing with them in the "last mile" can offer consumers a choice of broadband services. The theory of special access price regulation is simple: (1) small carriers and consumers are protected from unreasonable rates and (2) carriers are encouraged to operate with increased efficiency by utilizing the cost savings obtained as a result of lowered special access prices. For wireless service providers, this would mean lower costs for backhaul to their cell towers and enable them to concentrate on increasing "cell sites" in underserved areas.

For determining whether regulation on special access pricing is required, the Commission currently assesses competition by measuring the degree of "collocation" in Metropolitan Statistical Areas. Collocation refers to the number of competitive carriers who set up equipment in a facility provided by the incumbent carriers. The Commission believes that the degree of collocation of equipment is an indication that competitive carriers have made investments in the special access facility and that this will thwart any market power that the incumbents possess.[37]

In 2006, the Government and Accountability Office reviewed this methodology and found it flawed. According to the report, after the Commission establishes competition in an area (on the basis of collocation) and deregulates prices, it does not re-examine whether the competing carriers survive or are folded within the incumbents. Additionally, the report

[35] *See, e.g.*, "Report Reignites Fights over Special Access Rates", Ars Technica, [January 26, 2009], http://arstechnica.com/tech-policy/news/2009/01/report-reignites-fight-over-special-access-rates.ars [accessed: May 29, 2009].
[36] *See* Derek Turner, "Dismantling Digital Deregulation: Towards a National Broadband Study," Freepress, http://www.freepress.net/files/Dismantling_Digital_Deregulation.pdf [accessed: June 1, 2009].
[37] "Report Reignites Fights over Special Access Rates", Ars Technica.

established that after price deregulation, special access rates did increase noticeably. The report recommended the use of market share and pricing data as determinants of competition.[38] A recently released report, by the National Association of Regulatory Utility Commissioners (NARUC)[39], also suggests that the Commission's methodology of measuring competition in these special access markets is inaccurate. It even points out that the incumbent local exchange carriers have strong market power in most areas. Although, the report does not call for a reduction in special access rates, it proposes a cap on these prices.

All in all, the Commission must conduct a thorough review of its policies regarding competition and prices in the special access market and ensure that incumbent providers make bandwidth available at reasonable and non-discriminatory prices. This will guarantee that consumers are benefited in terms of choice, price and quality of broadband services and that efficient investment in broadband infrastructure is encouraged.

C. Spectrum Access Is A Critical Input For A Vibrant Broadband Market.

Spectrum reform is essential to make more effective use of public spectrum, enable increased broadband access and stimulate competition among service providers. Advances in the engineering of wireless systems are changing the way spectrum should be regulated. Thus, there is a strong need for the Commission to metamorphose the governance of the spectrum from a "property-right" model to a "public-good" model which will help promote national access to broadband service.

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[38] U.S. Government Accountability Office," Telecommunications: FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services," [November 29, 2006], http://www.gao.gov/products/GAO-07-80 [accessed: June 1, 2009].

[39] Peter Bluhm and Robert Loube, "Competitive Issues in Special Access Markets," National Regulatory Research Institute, [January 21, 2009], http://www.naruc.org/Publications/09%200121%20NARUC%20NRRI_spcl_access_mkts_jan09-02%20_2_.pdf [accessed: June 1, 2009].

The traditional concept of interference in the spectrum is no longer a constraint on the efficient and flexible use of wireless communication. Use of spread-spectrum radio and novel "smart" devices that can coordinate with each other at lower power levels and no interference have transformed our understanding of the spectrum. Wifi (currently using three small slices of open spectrum: 900 MHz, 2.5 GHz and 5.7 GHz)[40] has already demonstrated that this form of spectrum use can open doors to myriad innovative "prosumer" (consumer who acts both as a consumer as well as a producer)[41] innovations.

Spectrum is currently thought of as scarce since it has been treated as permanent property and this scarcity makes it highly "valuable." Re-assignment of spectrum from licensed to unlicensed spectrum reduces this value and faces opposition from those who have held licenses and especially those who have paid billions of dollars for those licenses. Of course, the approach of expanding the use of unlicensed spectrum will require that detailed communication protocols be established to guard against sources of inefficiency. One such source of inefficiency could be introduced by a device that does not have any incentive to conserve the shared spectrum. It could become "greedy" and use greater bandwidth for transmission or transmit for prolonged intervals. This would make the spectrum a rivaled "commons" model and in the extreme lead to the "tragedy of the commons" with many greedy devices degrading the performance of other devices. Thus there is a need to implement technical rules (*i.e.*, modulation, back-off schemes, etc.) to address these failures.[42]

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[40] Free103point9 Newsroom, "Congress considers inventory of spectrum use in America," Blog, [March 25, 2009], http://blog.free103point9.org/2009/03/congress-considers-inventory-of.html [accessed: May 28, 2009].
[41] Term coined by futurist Alvin Toffler.
[42] Jon Peha, "Emerging Technology and Spectrum Policy Reform," Carnegie Mellon University, [January 2007], http://www.itu.int/osg/spu/stn/spectrum/workshop_proceedings/Background_Papers_Final/Jon%20Peha%20ITU%20spectrum%20workshop.pdf [accessed: May 28, 2009].

There is also speculation that a large part of the spectrum is currently not fully utilized.[43] The radio spectrum is an asset of the nation and its effective utilization for the benefit of the citizens is long overdue. Without a clear understanding of the current use of spectrum, it is difficult to have an informed decision on how to allocate spectrum more efficiently. As a first step, the FCC should get a full account of the country's spectrum assets. To this effect a bill, the Radio Spectrum Inventory Act, has already been introduced before the Congress earlier this year.[44]

As a next step, the Commission should reallocate these unused spectrum resources as shared and unlicensed spectrum capacity; in particular from private markets that have simply "borrowed" spectrum frequencies. Auctioning off the fallow spectrum for exclusive use by a corporation or entity might deliver immediate monetary gains but will strangle long-term economic benefits of an open spectrum.

It should also be noted that although unlicensed spectrum bands will enable greater spectrum utilization, licensed spectrum bands are more appropriate than unlicensed ones for applications that require a guaranteed and higher quality of service viz. public safety information transmissions and broadcast television etc.[45] Therefore, maintaining a proper balance between licensed and unlicensed use is necessary. With that said, when the Commission provides licensed spectrum, it should recoup some compensation for the use of this public good. This compensation could be in the form of either an "annual user fee" or provisioning for services over this spectrum that would foster the public interest.

[43] Free103point9 Newsroom, "Congress considers inventory of spectrum use in America."
[44] OpenCongress, "Radio Spectrum Inventory Act," [March 19, 2009], http://www.opencongress.org/bill/111-s649/text [accessed: May 29, 2009].
[45] Jon Peha, "Emerging Technology and Spectrum Policy Reform."

The Commission's propitious decision on opening white spaces for unlicensed use is laudable, yet more pliancy is needed as far as the power levels are concerned. The Commission has established that transmission be restricted to low power levels while using white spaces adjacent to the broadcast channels.[46] Rural areas would have more white spaces compared to urban regions due to presence of fewer broadcasting channels there. Thus, they should be able to take better advantage of this mode of wireless broadband access as compared to urban areas. However, the requirement that the white space devices use low-power transmission will be a problem.[47] Signals will dampen and become weaker as distances increase and this means use of more repeaters to keep up the signal strength. Promoting transmission using a higher power level in these underserved areas would make wireless broadband more accessible to the rural community.[48]

Regarding the low-power devices to be used for transmission in the white spaces, there are a few noteworthy issues that require to be addressed by the Commission, to advance fair competition amidst service providers. The low-power white space devices will use geolocation sensing to avoid interference with other broadcasting signals. This device will access a geolocation database via the Internet to detect available free channels in its vicinity. The Commission should ensure that these databases are developed using open formats and protocols that are non-proprietary. The Commission has already asserted that the database will be administered by a third party selected via a "public notice process."[49] In this regard, the

[46] *See* ET Docket No. 04-186 and ET Docket No. 02-380.
[47] Gigaom, "We're Gonna Have to Wait a Year for White Spaces," Stacey Higginbotham, [November 5, 2008], http://gigaom.com/2008/11/05/were-gonna-have-to-wait-a-year-for-white-spaces/ [accessed: June 2, 2009].
[48] It is also important to remember that a white space device would still need a backhaul to the Internet and that the speed of the device would depend on the backhaul technology (*i.e.,* telephone modem, cable, fiber). Therefore, to facilitate broadband access, especially in rural areas, the Commission should adopt measures to complement wireless broadband with other broadband platforms like cable and fiber.
[49] *See,*\ ET Docket No. 04-186 and ET Docket No. 02-380.

Commission should also safeguard that the administration of the database takes place in an open and non-exclusive manner to foster healthy competition.

D. Without A Spectrum Cap, The Mobile Market Will Experience Further Consolidation

Spectrum caps are necessary to facilitate competition in the market for wireless broadband. Spectrum caps were introduced in 1994[50] to stimulate competition and ensure that incumbent wireless providers did not gain substantial "first-mover advantages". In the following years, however, there was Intense lobbying by incumbent carriers for the termination of these caps.[51] In 2003, the Commission finally eliminated the spectrum cap on the belief that no single carriers had significant market power to be considered a threat to competition.[52]

Since the Commission lifted the spectrum cap, the wireless market has undergone a great change from a competitive model to one where just a few wireless providers have most of the market power.[53] These handful providers have acquired control over large chunks of the spectrum either at auctions for licensed spectrum, where these providers have been able to use their purchasing power to ward off new-entrants in the market, or in subsequent mergers between two providers with large market power or in deals between these providers, such as negotiations over roaming provisions. This anti-competitive environment has been created due to the absence of spectrum caps.

For example, the absence of any spectrum cap in the recent 700 MHz spectrum auction led to greater market consolidation, with the wireless market getting divided into two parts –

[50] The New York Times, "F.C.C Is Expected to Lift Airwave Spectrum Cap," Simon Romero, [November 8, 2001], http://www.nytimes.com/2001/11/08/business/fcc-is-expected-to-lift-airwave-spectrum-cap.html [accessed: June 3, 2009].
[51] Id.
[52] FCC News, "FCC Anounces Wireless Spectrum Cap To Sunset Effective January 1, 2003," [November 8, 2001], http://www.fcc.gov/Bureaus/Wireless/News_Releases/2001/nrwl0129.html [accessed: June 2, 2009].
[53] Wired, "In Spectrum Auction, Winners Are AT&T, Verizon and Openness," Bryan Gardiner, [March 20, 2008], http://www.wired.com/epicenter/2008/03/fcc-releases-70/ [accessed: May 29, 2009].

AT&T and Verizon and the rest of the providers.[54] Another example of growing anti-competition due to absence of a spectrum cap is the merger between Sprint and Clearwire. The Commission voted in favor of the merger without even assessing the spectrum holdings of the two companies. Presence of a spectrum cap would have subjected the spectrum holdings of the two companies to close examination and could have led to divestiture of some of their holdings, if they exceeded the cap.[55]

The Commission should re-adopt a spectrum cap to mitigate the problems associated with the abuse of market power in an anti-competitive wireless market. The Commission should set a spectrum cap at 95 MHz and should also implement a "spectrum screen" (on spectrum above 2.3 GHz) as a guideline and rule for spectrum holdings.[56] Both the cap and the screen will help to promote competition by limiting the acquisition power of incumbents and by allowing smaller providers access to additional spectrum in the higher spectrum bands.

E. Roaming, Wireless Carterfone & Handset Exclusivity

Spectrum holdings become an important asset, especially in the last mile, which sets the pace of competition in the wireless broadband market. To sell services in a particular region, the network service provider has to have rights to the spectrum in that region or rely on roaming deals with the holder of the spectrum for that region. The absence of substantial competition in the current market has led to an abuse of market power with regard to these roaming agreements for small providers. Unable to bargain on these roaming contracts with incumbent providers, the competitors have to either stop operating or merge with the incumbent providers. The Commission should enforce reasonable and non-discriminatory terms on established operators to

[54] Wired, "In Spectrum Auction, Winners Are AT&T, Verizon and Openness."
[55] Market Watch, " FCC Approves Sprint, Clearwire Merger," [November 5, 2008], http://www.marketwatch.com/story/fcc-approves-sprint-clearwire-merger [accessed: June 3, 2009].
[56] New America Foundation, "Reply Comments of The Public Interest Spectrum Coalition," [December 22, 2008], http://www.newamerica.net/files/PISC_RTG_Reply_Comments_122208.pdf [accessed: June 2, 2009].

provide roaming and infrastructure facilities to new entrants in the market. This will enable more effective use of the spectrum and encourage competition among service providers.

To further foster competition between service providers, the Commission must address the anti-competitive issues that arise due to handset exclusivity between handset phone companies and the wireless service providers. Ideally, and in keeping with the principle of openness discussed in Part I, the Commission would impose the same rule on wireless networks that it imposes on wireline networks – the so-called "Cartefone" rule requiring that network operators create a standard that permits anyone to attach a any device to the network and run any application over the network that does not harm the network.[57] Even absent adoption of a "wireless Cartefone" rule, the Commission should still ban exclusive contracts for hand-held devices as a simple matter of competition policy.

Many popular devices (*e.g.*, smartphones) in the market are making exclusive arrangements with the incumbent national carriers and creating a large barrier to entry into the wireless markets. Apple's iPhone exclusivity to AT&T combined with AT&T's policy of limiting its users to no more than 40% of roaming time off the AT&T network,[58] exemplifies how handset exclusivity is driving users away from small wireless providers. Consequently, handset exclusivity leads to greater market consolidation and such arrangements should be annulled. Termination of handset exclusivity contracts by the Commission will advance economical use of the spectrum and increase competition in the wireless market, ultimately benefiting the consumers.

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[57] *See* Tim wu, "Wireless Net Neutrality: Cellular *Cartefone* and Consumer Choice in Mobile Broadband," New America Working Paper #17 (2007).

[58] Barbara Esbin and Berin Szoka, "Exclusive Handset Prohibitions: Should the FCC Kill the Goose that Laid the Golden iPhone," The Progress and Freedom Foundation, [June 2008], http://www.scribd.com/doc/3253827/Exclusive-Handset-Prohibitions-Should-the-FCC-Kill-the-Goose-that-Laid-the-Golden-iPhone-PFF-EsbinSzoka [accessed: May 29, 2009].

F. Commission Policy Should Explicitly Identify and Seek To Reduce Switching Costs of All Kind to Enhance Competition

Switching costs aggravate the problem of anti-competition in the broadband market. Early termination fee is one form of switching costs which discourages consumers from switching amongst network providers in search of better quality of service, costs, etc. The current early termination fee in the market is inappropriately high which is why consumers are forced to stay with their service provider despite dissatisfaction with the services or cost. As a result, these costs discourage competition.

This early termination fee has been a familiar feature in wireless phone contracts for several years now. In the cellular market, several lawsuits, introduction of bills[59] and proposals by the Commission[60] have led major mobile carriers to pro-rate their early termination fees.[61] However, the fee is still quite high. Despite the long drawn debate on the early termination fee issue in the cellular market, consumers continue to pay unfair wireless phone penalties. A troubling phenomenon is that a parallel situation is developing in the broadband market. The Commission should ensure that such a tedious and protracted early termination fee dispute, like the one in the cellular market, does not occur in the broadband market.

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[59] *See* Cell Phone Consumer Empowerment Act of 2007, Bill No. S.2033, [filed September 7, 2007]. The Bill was introduced to allow subscribers to cancel their cell phone carrier's contract before the expiry of the contract, if they were dissatisfied by carrier's services. It also called for pro-rating the early termination fees.

[60] The Commission proposed that the early termination fee should be reasonably related to the cost of the equipment provided to the consumer. However, since phone companies do not reveal such information, estimating the true cost of the handset subsidies will be a challenge. Under the same proposal, the early termination fee would be pro-rated and would not be re-evaluated on a new phone plan unless, the consumer desired a new phone. Additionally, consumers would get up to 30 days after signing the contract (or until 10 days after the first bill is issued), to evaluate the phone they purchased. Returning the phone within this time period would entail no early termination fees. *See* Market Watch, "Wireless-phone penalties unfair to consumers," Jeffry Bartash, [June 14, 2008], http://www.marketwatch.com/story/early-termination-fees-on-wireless-customers-fail-fairness-test-20086140100?pagenumber=1 [accessed: June 2, 2009].

61 Cnet News, "Sprint, T-Mobile to Pro-Rate Early Termination Fees," Kent German, [November 9, 2007], http://news.cnet.com/8301-17938_105-9814184-1.html [accessed: June 1, 2009].

In the recent years, broadband Internet providers have started increasingly imposing early termination fee to prevent their consumers from straying away. In the broadband market, many low-priced promotional services are offered along with the early termination fee to entice customers to sign up.[62] While broadband providers may justify these fees on the pretext of discounted equipment, reduced installation charges and monthly subscription fees, they deprive customers of the benefits of competition especially in the underserved markets. Additionally, these different promotional offers and plans are constantly changing.[63] This makes it very difficult to asses the actual worth of the offerings and creates ambiguity on whether a customer actually benefits from purchasing a plan with early termination fee provisions or not. For customers who move from one place to another, payment of early termination fee is a huge cost, especially if it is not pro-rated. The Commission should ensure that broadband providers focus on providing better quality of service to ensure the retention of their customers and not on vexing contract terms that shackle their customers. It must assess, slash and where needed terminate these expensive penalties. Doing this will foster greater competition in the mobile wireless market.

G. The Lack of Available Information Prevents The Development of an Efficient Market

As discussed in Part IV below, we as a nation find ourselves without the data necessary to make truly informed broadband policy choices. In considering what information to collect and what data to require industry participants to disclose, the Commission must consider how the lack of available information warps the existing wholesale services market and inhibits the development of competition.

[62] hearusnow.org, "The Next Big Thing in Broadband: Early Termination Penalties", Frayam, [April, 9, 2007], http://www.consumersunion.org/blogs/hun/2007/04/the_next_big_thing_in_broadban.html [accessed: June 1, 2009].
[63] Id.

It is a truism to the point of cliché to observe that competitive markets require information to operate efficiently. Unless potential buyers can compare prices and services, they cannot make informed choices among vendors and so provide discipline to the market. Unless vendors know the prices paid by buyers, they cannot tell how to price their own services. In the consumer market, the need to advertise to attract customers provides consumers with at least some information. But in commercial markets, this need not be the case. Especially where, as here, market concentration produces a handful of providers capable of imposing non-disclosure agreements.

Although all parties suffer from the information asymmetries produced, the burden falls hardest on small businesses. Larger businesses with greater resources, and engaged in a greater number of transactions, can accumulate their own knowledge as to how the market operates. But smaller businesses are unlikely to have the resources to invest in information gathering such as soliciting multiple offers. Nor are the same number of vendors or purchasers likely to approach smaller market participants.

To the extent the National Broadband Plan relies on market forces, it must carefully consider what disclosures to require to ensure a functioning market. At one extreme, the Commission may require providers to tariff certain services, even if the Commission does not regulate the price of the tariff. At the other end, the Commission may continue to do nothing and hope that market forces drive participants to disclose sufficient information. In between these two extremes lies a range of possibilities such as conducting regional price surveys and prohibiting nondisclosure agreements. In all cases, the National Broadband Plan should carefully consider the impact on competition of allowing market participants, particularly in markets dominated by a few large actors, to withhold or suppress information.

III. THE NATIONAL BROADBAND PLAN MUST ADDRESS THE "DEMAND SIDE" AS WELL AS THE "PRODUCTION SIDE" OF BROADBAND ADOPTION

As part of a National Broadband Plan, the Commission should consider also addressing in a limited fashion the demand side of the broadband equation. As a starting point, the Commission should not consider itself as a marketing arm for the service providers. At the same time, the Commission has an obligation to monitor not only the deployment of broadband facilities, but to track barriers to deployment and adoption and to help to make the benefits of broadband widely known.

The research about why potential customers don't subscribe to broadband is very thin. One study, by the Pew Internet and American Life Project, found that dial-up users don't want give up their connections, and don't believe broadband is a good value.[64] Other, more anecdotal reports from Free Press, e-NC and others, suggest there is a great demand for broadband in rural areas that isn't being satisfied.[65] Indeed, a recent article in the Wall Street Journal chronicled how the homeless regarded broadband access as a lifeline to keep from drifting permanently into poverty.[66]

The Commission's role should be to track and, if necessary, contribute to research on broadband take-up by continually examining pricing data, take rates for the service and build-out progress, and reporting that research to the public. The Commission could also support locally

[64] John Horrigan, "Stimulating Broadband: If Obama Builds It, Will They Log On?" Pew Internet and American Life Project (2009). Available at http://www.pewinternet.org/Reports/2009/Stimulating-Broadband-If-Obama-builds-it-will-they-log-on.aspx (last viewed June 8, 2009).

[65] *See, e.g.*, http://www.internetforeveryone.org/americaoffline/nc (video interview with the Foushee Family); e-NC.org, "Bigger Vision, Bolder Action, Brighter Future: Capturing the Promise of Broadband for North Carolina and America (The Baller Herbst Report)", June 2004, *available at* http://e-nc.org/Baller-Herbst_Report.asp (last visited June 8, 2009).

[66] Phred Dvorak, "On the Street and On Facebook: the Homeless Stay Wired," Wall St. J. Page 1 (May 30, 2009), available at http://online.wsj.com/article/SB124363359881267523.html (last viewed June 18, 2009).

based research, from universities or other institutions, which tracks why, and why not, broadband might be lagging in any particular area.

Implementing other parts of the broadband plan, of course, could help adoption rates to increase. By allowing for more competition, consumers would have more choice in services and features, and at lower prices than offered in today's quasi-duopoly environment.

In raising awareness of the value of broadband, the Commission should endeavor to support local groups already engaged in such activities. Experience has shown that the most effective means of raising awareness about the potential for broadband is through locally based technology evangelists, whether based in state or local governments, non-profits or the private sector.

Having an outside group come into a locality, conduct a few focus group sessions and then leave, is not a workable model for sustained broadband adoption. The Commission could lend its support to existing, local organizations by, among other items, serving as a clearinghouse for good practices, using social networking tools to encourage information-sharing in how to communicate the benefits of broadband, outlining specific benefits that have accrued to each community, by sponsoring national or regional conferences as a means of information exchange.

Similarly, the Commission could help with ancillary activities such as computer training and access to computers. Computer training has been an ongoing activity for decades, although usually targeted toward use of software programs. The Commission could support activities in communities to showcase the use of computers and online services as provided by local organizations.

IV. THE NATIONAL BROADBAND POLICY MUST CAPTURE ALL NECESSARY DATA TO PROPERLY INFORM THE POLICY

Since Congress first ordered the Commission to ensure deployment of "advanced telecommunications capability" to all Americans, the FCC has focused on the simple question of whether residential subscribers have access to "broadband" – defined initially as 200 kbps and recently raised to 768 kbps. Recently, Congress and the Commission have attempted to augment this concept of a "broadband map" with comparisons with other countries and with improved data collection requirements. The focus, however, remains the same: can residential end users get access to broadband, at what speeds, and – possibly – at what cost.

A data driven broadband plan requires more than information on availability of services to end users. As an initial matter, we cannot fully address any perceived shortages and deficiencies in the provision of broadband unless we know what our broadband network looks like. This includes not merely the "last mile," but the "middle mile" and the nature of the traffic that rides the existing network. We need a greater understand of potential resources available, such as dark fiber and government fiber which we could harness to alleviate shortages in transport.

Furthermore, while evidence to date bears out the policy that universal broadband increases access to economic and educational resources, encourages civic engagement, and allows individuals to develop needed social capital, we have no deep science of "qualitative metrics" that can tell us whether broadband is, in fact, delivering these benefits – and if not why not. The numerous conflicting studies to date are worse than the proverbial apples to oranges comparison. For example, on the pivotal policy question of "does local government investment in broadband work," we cannot even agree on what constitutes success or failure – or even what constitutes government investment. In this absence of any sort of qualitative metrics about what

broadband does and how it impacts people's lives, we cannot even know if our national broadband policy will have succeeded in its goals of improving the lives of all Americans.

A. Complete The National Broadband Map From Beginning to Middle To End

A National Broadband Plan worthy of the name requires far greater data then this simple map of the final product. Too many questions that should inform our policy of ubiquitous, affordable broadband go unanswered. As an initial matter, we know absolutely nothing about the "middle mile" market in this country. Carriers have repeatedly complained about a need for backhaul for both wireless and broadband services. But we have no way to evaluate whether this is a regional issue related to cost of deployment, an antitrust issue related to vertical integration, a market inefficiency from the lack of market transparency, or a misallocation of resources such as spectrum access. Indeed, we do not know with certainty whether the complaints of carriers are real, whether they represent systemic problems, or are simply attempts to invoke Commission authority to further their own commercial interests.

Before we can begin to address any of these issues, we must remedy our ignorance. We must go beyond previous mapping exercises and begin to cast our net much wider. This must include information the Commission has previously refused to collect on the grounds that carriers preferred to keep this information proprietary. It must also include information from non-commercial actors, such as federal and local government agencies. As discussed in Part V below, these agencies can potentially provide significant resources if freed from the artificial restrictions placed on them.

In short, our national broadband map, which must inform our continued investment in our broadband infrastructure, must be complete. We can no longer tolerate a broadband map ending in a drawing of a cloud with the notation "here be servers." In no other area of our critical

infrastructure are we content to allow such utter ignorance—never mind make policy in the absence of fundamental data.

B. We Need A Better Understanding of The Nature of Internet Traffic

In addition to a thorough map of the "pipes," we need a better understanding of the traffic that rides the pipes. In the early days of the Internet, Worldcom succeeded in perpetrating a fraud of devastating proportions on the backbone market by claiming to experience phenomenal traffic growth. No one could document this growth or disprove it, so investors and competing providers accepted Worldcom's statements. By the time the truth became too difficult to hide, Worldcom had driven itself into bankruptcy and had created such over investment in "dark fiber" that carriers experienced depressed returns and avoided future investment for years.

This is but a single, blatant example of how our ignorance of the nature of Internet traffic can hurt us. This ignorance about the nature of traffic impacts every aspect of broadband policy. Experts constantly debate the reality of the supposed "exaflood" that commercial actors use to justify any behavior from blocking peer-to-peer traffic to demanding third-party payments for delivery of high-bandwidth content. But no one can even say with certainty what percentage of Internet traffic is peer-to-peer, streaming video, routing information, or even security patches for Microsoft Windows.

It is imperative for the development and sustainability of a robust national broadband system that we gain a better understanding of the traffic that passes daily through our critical infrastructure. Collecting this information, however, presents numerous difficulties. Even if broadband access providers and other network operators wanted to provide this information, the collection of the information could give rise to significant concerns about user privacy and cybersecurity.

The Commission should therefore carefully consider what data network operators and access providers already collect, and how to collect this information with sufficient granularity to be useful while obscuring personal information or creating new network weaknesses. While the need for information is real, we must balance this need against the real concerns of both network operators and network subscribers.

C. The Data Collected Should Include Qualitative Metrics, Create Standardized Methodologies, and Set Triggers For Policy Intervention.

In the last fifty years, we have developed numerous qualitative metrics to measure the economy, education, and other areas critical to our national well being. We can track consumer confidence, look at the relationship between high school education and earning power, and analyze whether a market is competitive. But we have yet to agree upon a standard set of indicators by which we can judge the success of our broadband policy in improving people's lives.

As part of the National Broadband Plan, we should at least begin to develop a set of "qualitative metrics," that will indicate not merely where broadband is available, but what it does for people. We must consider this a critical element not merely in assessing the "demand side" of the broadband equation, as discussed in Part III above, but as necessary data to develop a complete broadband policy. The results should inform federal funding, and related federal policy, as discussed further below.

V. THE ROLE OF NON-COMMERCIAL ACTORS: FEDERAL, STATE, LOCAL AND NON-PROFITS.

As noted in the beginning, federal policy until now has viewed broadband deployment as a matter of bribing or coercing commercial actors. Only recently, with the passage of the ARRA, has Congress explicitly recognized the important role of non-commercial players in providing

sustainable broadband to communities.[67] Indeed, rather than examine how non-commercial entities could play a productive role in our National Broadband Plan, federal and state policy has too often sought to limit the role of non-commercial actors on the spurious ground that such entities should "not compete with the private sector." The National Broadband Plan should discard this outmoded and dangerous notion and should instead consider how best to incorporate the resources non-commercial actors have to offer in developing our critical broadband infrastructure.

The Federal government has a crucial role to play in the National Broadband Plan beyond writing blank checks to commercial entities. It is the job of the Federal government to coordinate across Federal, State and Local agencies and to fully leverage the assets and expertise of local communities and non-profit organizations as we work toward the goal of universal broadband access. In order to do this, the Federal government will have to design and adopt a "mindful" policy across all agencies that incorporates broadband into government-wide objectives, in order to fully leverage and promote the benefits of broadband access.

Physical connectivity, of course, is but one piece in a larger puzzle. In order to enjoy the benefits of universal access, we will need a national strategy for education. To this end, the Federal government should call upon community institutions such as libraries, educational institutions and community centers to assist with deployment and training. These institutions are uniquely positioned to lend a hand in these efforts, as they understand the needs of their local communities and can serve as intermediaries between citizens and the executors of the National Broadband Plan.

[67] ARRA §§6001(b)(3), 6001(e).

Finally, either the FCC or Congress should consider enacting taking steps to preempt any legal impediments to broadband deployment, such as State or Federal acceptable use agreements and policy restrictions on "competing with the private sector". As long as such impediments remain, the National Broadband Plan will be unable to live up to its promise of universal access for all Americans.

A. The National Broadband Plan Should Explicitly Call for the Removal of Legal Barriers to Deployment By Non-Commercial Entities.

Many municipalities have attempted to meet consumer and citizen demand for high-speed connectivity in areas where incumbent providers have failed to provide it.[68] In many of these cases, consumers are denied these services because of restrictive "acceptable use policies" or because of protectionist laws lobbied for by incumbent providers. If a broadband plan is to benefit from the diverse methods available for providing connectivity, such counterproductive and anticompetitive barriers to connectivity must be eliminated.

The Commission itself has recognized in the telecommunications sector that municipally-owned services would serve the goals of enhancing access and competition.[69] The Supreme Court has likewise recognized that state laws restricting municipal and local provision of services is purely the result of anticompetitive lobbying.[70] When existing service providers fail to deliver the speeds that residents demand, those residents should have the choice, as expressed through their votes in both ballots and dollars, to have their municipalities offer them a much-needed utility. The Commission should therefore act to preempt state and local regulations that

[68] *See* Fiona Morgan, *Mighty, mighty broadband*, INDYWEEK, June 18, 2008, *available at* http://www.indyweek.com/gyrobase/Content?oid=oid%3A259848 (industry estimates 44 publicly owned fiber networks in the US).
[69] *See Nixon v. Missouri Municipal League*, 541 U.S. 125, 131-32 (2004) (quoting statements from the then-Chairman, Commissioner Tristani, and Commissioner Ness)
[70] *Nixon v. Missouri Municipal League*, 541 U.S. at 138.

would prevent citizens and consumers from choosing to create access where existing providers have failed to create a competitive market—or any market at all.

The FCC possesses the authority—and perhaps the obligation—to do so.[71] Current precedent does not create any burden to such preemptive action. To the extent that state laws prohibiting publicly-offered broadband Internet services may be based on laws limiting telecommunications services like those in *Nixon v. Missouri Municipal League*,[72] it should be noted that the Supreme Court's limitation of preemption explicitly did not extend to municipally-owned, independently chartered corporations.[73] Section 253(a) therefore provides the Commission with a ready authority to preempt laws that so restrict independently chartered corporations owned by municipalities. The Commission is also obligated by section 706 of the 1996 Act to actively encourage the deployment of broadband Internet services, and is authorized to use "measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure development."[74]

This obligation, coupled with the Commission's broader mission to encourage competition and connectivity, militates towards the proper exercise of its preemption powers to let communities meet their own demand for broadband.

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[71] Matthew Dunne, *Note: Let My People Go (Online): The Power of the FCC to Preempt State Laws that Prohibit Municipal Broadband*, 107 COLUM. L. REV. 1126 (2007).
[72] Notably, since the ruling in *Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Services*, cable broadband providers (and presumably a number of over broadband providers) are not telecommunications services. 545 U. S. 967 (2005). Thus, laws prohibiting the offering of telecommunications services would not preclude the offering of broadband Internet.
[73] *Nixon v. Missouri Municipal League,* 541 U.S. at 131 n.2.
[74] Telecommunications Act of 1996, Pub. L. No. 104-104 §706(a), 110 Stat. 56 (1996).

B. All Federal Agencies Should Seek to Leverage Broadband To Meet Their Objectives and Be Mindful Whether Programs Accidentally Create Barriers To Broadband Adoption

If the Federal government is to promote the benefits of broadband connectivity to its citizens, it must itself become an exemplar of these benefits. As part of the National Broadband Plan, the Federal government should be an evangelist for broadband, by embracing new media technologies at all levels of government. In order to achieve this goal, the architects of the plan will have to craft a "mindful" Federal policy, one that incorporates broadband into government-wide policy initiatives and which leverages and promotes the advantages of broadband access.

During the 2008 Presidential campaign, President Barack Obama successfully utilized a number of new media tools--including Twitter and YouTube--to organize and mobilize online communities. The Federal government now has before it an opportunity to use many of these same tools to provide citizens with information, increase transparency and encourage engagement and participation in government processes. We recommend that Congress establish an executive agency to craft and execute a Federal policy for adopting and evangelizing these tools and others across all Federal agencies.

C. Use of Community "Anchor Institutions" Such As Libraries and Community Colleges

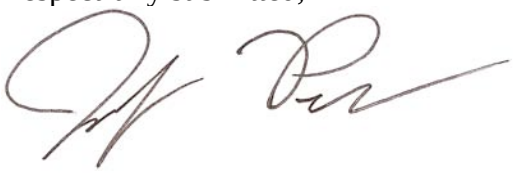
With regard to both the physical deployment of broadband and the education of new broadband users, community organizations such as libraries, community colleges and community centers have an important role to play. First, they can serve as "anchor organizations," organizations that provide free broadband service and training, thereby serving as a beachhead into their community. Additionally, if these organizations receive high-speed Internet access as part of the National Broadband Plan, they could serve as resellers of bandwidth, thereby encouraging competition and incentivizing new entrants into the market at a local level.

Second, these institutions can serve as important allies in the effort to provide information and training in local communities. As broadband becomes available in communities where it was previously unavailable or unaffordable, there will be a great need for institutions that can provide citizens with information regarding how best to acquire, set up and utilize a broadband Internet connection. Furthermore, these citizens could be trained in new media literacy, on how best to use their broadband connection for educational, economic and creative pursuits and on how to use the web to become more engaged in their communities and government. If we succeed in our goal of making broadband ubiquitous in the United States, such training will be crucial in ensuring that all citizens are able to take full advantage of the tremendous opportunities that broadband connectivity can bring to each and every American.

CONCLUSION

The creation of a comprehensive National Broadband Plan provides a unique opportunity for us as a nation to choose how our digital destiny will unfold. Congress, and the American people, expect bold action. The principles set forth in these comments provide a road map for the agency to formulate a broadband plan that can secure for us a rich and productive future.

Respectfully submitted,



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